WEST Search History

DATE: Thursday, October 31, 2002

Set Name side by side	Query	Hit Count	Set Name result set
DB=USPT; PLUR=YES; OP=ADJ			
L13	l7 same (tim$ or clock$) same threshold$	10	L13
L12	(L11 or l7) near8 (load$ or busy) near8 server$	3	L12
L11	packet near2 (size$ or sizing$ or length)	7244	L11
L10	5953506[pn]	1	L10
L9	L8 and l3	9	L9
L8	l7[ti,ab]	234	L8
L7	packet near2 (aggregat$ or group$ or combin$)	3063	L7
L6	L4[ti,ab]	2	L6
L5	L4 and l3	3	L5
L4	(server$ near6 load$) same ((packet$ or data) near4 (aggregat$ or combin$ or group$))	61	L4
L3	l1 or ((709/230 or 709/231 or 709/232).ccls.)	1445	L3
L2	((709/203)!.CCLS.)	1493	L2
L1	((709/236)!.CCLS.)	399	L1

END OF SEARCH HISTORY

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L13: Entry 9 of 10 File: USPT Mar 23, 1993

DOCUMENT-IDENTIFIER: US 5197127 A
TITLE: Expert system method for performing window protocol-based data flow analysis within a data communication network

Detailed Description Text (7):
FIG. 6 illustrates the pacing mechanism for the window protocol. In some window protocols, the first packet transmitted in a group of packets during a transmission interval includes a request bit which is sent to the destination node M. At the destination node M, the receiver then transmits a response signal back to the sender node 1 which initiates the next transmission interval. The information contained in the header for the first packet being transmitted from node 1 to node M is fed back as a response from node M back to node 1 indicating whether the packet has been held in the queue 17 of node 1 and whether the congestion threshold has been exceeded. In a pacing mechanism in a window protocol, the current size of the window for transmission of packets from node 1 to node M can be increased up to the maximum size set at initialization, in response to the response from the node M indicating that a packet had been held in the preceding transmission interval. The current window size can be increased only up to the maximum window size set at initialization time.

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L9: Entry 4 of 9 File: USPT Dec 14, 1999

DOCUMENT-IDENTIFIER: US 6003089 A
TITLE: Method for constructing adaptive packet lengths in a congested network

Abstract Text (1):
In a network, the efficiency of data transfer is improved. The network includes packets of data (100, 120). The invention begins by preserving an original packet (100). A larger packet (140) is then constructed by combining two packets (100, 120). Either the original packet (100) or the larger packet (140) is transmitted over the network. The original packet (100) is transmitted if the media/port (52) becomes available for transmission before the larger packet (140) is constructed, and the larger packet (140) is transmitted if the constructing of the larger packet (140) is completed before the media (52) becomes available. In a network with cells, a packet is constructed by combining cells. This packet is built until the media becomes available for transmission. The size and composition of this packet is independent of an original packet's size and composition.

Current US Cross Reference Classification (5):
709/231

Current US Cross Reference Classification (6):
709/232

WEST Search History

DATE: Thursday, October 31, 2002

Set Name side by side	Query	Hit Count	Set Name result set
	DB=USPT; PLUR=YES; OP=ADJ		
L19	6041354[pn]	1	L19
L18	(packet near2 (size$ or sizing$ or length or group$ or combin$ or aggregat$)) same server$ same threshold$	4	L18
L17	windowing same server$ same threshold$	1	L17
L16	windowing same packet$ same server$ same threshold$	0	L16
L15	windowing same (server near2 (load$ or busy))	3	L15
L14	windowing same packet same (server near2 (load$ or busy))	1	L14
L13	l7 same (tim$ or clock$) same threshold$	10	L13
L12	(L11 or l7) near8 (load$ or busy) near8 server$	3	L12
L11	packet near2 (size$ or sizing$ or length)	7244	L11
L10	5953506[pn]	1	L10
L9	L8 and l3	9	L9
L8	l7[ti,ab]	234	L8
L7	packet near2 (aggregat$ or group$ or combin$)	3063	L7
L6	L4[ti,ab]	2	L6
L5	L4 and l3	3	L5
L4	(server$ near6 load$) same ((packet$ or data) near4 (aggregat$ or combin$ or group$))	61	L4
L3	l1 or ((709/230 or 709/231 or 709/232).ccls.)	1445	L3
L2	((709/203)!.CCLS.)	1493	L2
L1	((709/236)!.CCLS.)	399	L1

END OF SEARCH HISTORY

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L18: Entry 1 of 4 File: USPT Jun 25, 2002

DOCUMENT-IDENTIFIER: US 6411987 B1
TITLE: Industrial automation system and method having efficient network communication

Detailed Description Text (35):
FIG. 6 illustrates the "train station" model of data transmission employed by the real-time protocol. The steps set forth in FIG. 6 may be performed a plurality of times for each real-time server described in step 306. FIG. 6 is a refinement of step 306 as set forth in FIG. 5. In step 322 data is accumulated in the real-time server as it arrives from one or more hardware devices through one or more drivers. In step 324 the real-time server decides whether the amount of data in the packet is greater than a threshold packet size; in other words, whether the "train" is filled up to a predetermined capacity, e.g. a maximum capacity, with "passengers." If the amount of data is not greater than the threshold packet size, then in step 326 the real-time server decides whether the packet timeout has expired: in other words, whether the "train" has sat in the "station" for a long enough period of time. If neither test is met, i.e., the amount of data is less than the packet threshold and the packet timeout has not expired, then the real-time server does not send a packet; instead, the method loops back to step 322 to continue accumulating data. When the test in either step 324 or step 326 is met, i.e., the amount of data is less than the packet threshold and the packet timeout has not expired, then in step 328 the real-time server creates a packet with the accumulated data. In the preferred embodiment, the packet is created with the benefits of the Logos real-time protocol, such as delta compression and exception-based reporting (i.e., only the changes in data are sent). In step 330 the real-time server sends the packet to one or more clients who have subscribed to the data. Once this packet (or "train") has been sent, the process begins anew with the accumulation of data for another packet at step 322.

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L18: Entry 2 of 4 File: USPT Nov 28, 2000

DOCUMENT-IDENTIFIER: US 6154778 A
TITLE: Utility-based multi-category quality-of-service negotiation in distributed systems

Detailed Description Text (3):
The server requirement 13 correlates client behavior to utility values for the server and can be combined with a probability distribution of a client behavior mode to calculate an expected utility of a client operating mode. Because client behavior in a client operating mode is expressed in probabilistic terms, the server requirement produces an expected utility of the client operating mode which is expressed in probabilistic terms. In FIG. 1 the requirement function 13 correlates frequency of client calls and payload size of packets transmitted by the client to expected utility to the server. Although two aspects of client behavior are included in the server requirement in FIG. 1, more or fewer aspects may be included. The server requirement 13 may include a threshold 17 which must be satisfied if the server's estimated QoS behavior is to be considered a guarantee. Specifically, the combination of client call frequency and the payload size must satisfy the expected utility threshold The server requirement 13 is not necessarily monotonic with regard to a particular client behavior attribute. For instance, within a range of call frequency between one call per hour and twenty calls per hour, the expected utility does not necessarily only increase or only decrease. The expected utility might decrease between one and seven calls per hour, increase between seven and twelve calls per hour, and decrease again between thirteen and twenty calls per hour.

L18: Entry 4 of 4 File: USPT Jun 20, 1995

DOCUMENT-IDENTIFIER: US 5426635 A
TITLE: Method for adaptive control of windows and rates in networks

Detailed Description Text (6):
FIG. 2 is a block diagram of a portion of high speed data network using FCFS service discipline. A plurality of VCs, VC.sub.j, j=1, . . . , C, originating at respective sources, S.sub.j and having respective round trip delays .tau..sub.j, equally divided between forward and backward paths are shown, for simplicity, connected to only a single switch or node 204. It will be understood that in general a network will include a plurality of nodes 204. The switching node 204 is shown having a shared buffer 206 for queueing cells arriving from VCs; the serving (bandwidth allocation) function is represented by server 208. The various propagation delays for the VCs reflect the general case where sources 202 S.sub.1, S.sub.2, . . . S.sub.c may be located at various geographical sites. In FIG. 2, .lambda. and Q.sub.T represent, respectively, the service rate and a queue threshold at node 204. The packet size is assumed constant.